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Mr. Lea exhibited a specimen of Zircon imbedded in blue Quartz, from the vicinity of the Yellow Springs, Chester county, Pennsylvania.

Mr. Vaux requested the attention of the members to the beautiful suit of specimens of Minerals from Nova Scotia, presented this evening by Isaac Chipman, Esq., many of which were not in the collection of the Society.

December 23d.

Vice-President BRIDGES in the Chair.

Dr. Leidy read a paper, intended for publication in the Proceedings, entitled "Contributions to Helminthology." Referred to Drs. Hallowell, Wilson, and Zantzinger.

Dr. Le Conte read a paper, intended for publication in the Proceedings, entitled "Synopsis of the Lampyrides of temperate North America." Referred to Dr. Leidy, Dr. McEuen, and Mr. Lea.

Dr. Leidy made some remarks upon the two species of Rhinoceros from Nebraska, which he had named *R. Nebrascensis* and *R. occidentalis*, and said he had satisfied himself they both belonged to the subgenus *Acerotherium*, *Kaup.*, a good character of distinction of which, in the teeth, is the presence of a well developed basal ridge.

Mr. Lea exhibited a complete suite of specimens of *Unio multiplicatus*, from the Western Rivers of the United States, and made some extended remarks on the Family Naiidæ.

December 30th.

Vice-President WETHERILL in the Chair.

The Committee to which was referred the following paper by Dr. Le Conte, reported in favor of publication in the Proceedings.

Synopsis of the Lampyrides of Temperate North America.

BY JOHN L. LE CONTE, M. D.

LAMPYRIDES.

Mandibulæ integræ : labrum obtectum : abdomen 6-vel 7-articulatum articulis omnibus liberis : tarsi 5-articulati articulo quarto calceato, plus minusve bilobato ; femora ad trochanteris basin et latus inserta.

Div. 1^{ma}. *Photophori.*

Abdomen sæpissime 7-articulatum,* articulis ultimis sæpius phosphoreis ; antennæ approximatae ; tarsi articulo 4^{to} subtus calceato.

* Colophotia has only six segments in the abdomen.

α Caput exsertum; thorax antice truncatus.

PHENGODES Hoffg.

Antennæ 11-articulatæ, longe biramosæ, articulis 2 et 3 minutis; abdomen segmentulo anali aucto (an nota sexualis?), tarsi articulo 4^{to} simplici.

1. *P. plumosa* Hoffmansegg Illig. Mag. 6, 341. Laporte, Ann. Ent. Soc. Fr. 2, 128. *Lampyrus plumosa* Oliv. 2, tab. 38, 27; Fabr. Syst. El. 2, 105. *Phengodes testaceus* Leach, Zool. Journal, 1, 45.

Middle, Southern and Western States; very rare. Say observes (Bost. Journ. 1, 157) that it is abundant for a short period in the autumn, flying into rooms at night. The coolness with which Mr. Leach places Olivier's name as a synonym to that suggested by him is remarkable, and might be well worthy of a harsher comment.

 β Caput thorace obtectum; antennæ articulo 3^{to} sequentibus æquali.

POLYCLASIS Newman.

Antennæ 11-articulatæ, breviter bipectinatæ; palpi maxillares articulo ultimo securiformi; tarsi articulo 4^{to} vix lobato, unguis integri.

1. *P. bifaria*. *Lampyrus bifaria* Say. Bost. Journ. 1, 157. *Pollaclasis ovata* Newman. Ent. Mag. 5, 382.

Southern States, Haldeman; very rare. I have corrected Newman's vicious spelling of the generic name. This species must give but little light, only the last joint of the abdomen is pale colored in my specimen.

LUCERNUTA Lap.

Lychnuris † Dej.

Antennæ 11-articulatæ, dilatatæ, compressæ; palpi maxillares articulo ultimo magno securiformi; tarsi articulo 4^{to} longe lobato, unguis simplices; abdomen apice phosphoreum, articulo ultimo superiore apice emarginato.

The males are distinguished by the longer and broader antennæ, and the larger size of the last superior abdominal segment which extends beyond the inferior one in every direction; they have also a small additional anal segment beneath.

1. *L. atra*. *Lampyrus atra* Fabr. Ent. Syst. 2, 101; Oliv. 28, tab. 3, 28; *Lampyrus laticornis* Fabr. Syst. El. 2, 100; *Photinus* (*Lucernuta*) *laticornis*, Laporte. An. Ent. Fr. 2, 144. *Lychn. morio* Mels. Pr. Ac. Nat. Sc. 2, 303.

Abundant everywhere. I have restored Fabricius' older name, as I see no reason mentioned for changing it; I have a variety from Georgia with the whole of the posterior part of the thorax blackish.

2. *L. tarda*, atra, nigro-pubescent thorace apice subangulato, scabro lateribus subito late reflexis, fusco-testaceis, basi late emarginato, disco late canaliculato, ante basin utrinque transversim elevato, elytris confertim minus subtiliter granulatis. Long. .33.

Ohio, Dr. Kirtland. Very similar to the preceding; the sides of the thorax are more suddenly reflexed, and the disc is channeled; the basal elevation on each side is broader and less sudden, rather a line than a tubercle, and the elevated lines of the elytra are scarcely visible.

3. *L. punctata*, atra, griseo-pubescens, thorace apice vix angulato, marginibus subreflexis pallidis, punctatis, disco versus basin late foveato, cum margine basali vix emarginata nigro, utrinque ante basin macula rosea ornato, elytris grossius granulato-punctatis. Long. .25.

Georgia, in Habersham county. The antennæ are as broad as in *L. atra*, and in the same manner are shorter in the female than in the male. The basal angles of the thorax are almost always dark colored; the discoidal spot is sometimes almost disconnected with the base.

ELLYCHNIA †Dej.

Antennæ compressæ, 11-articulatæ, palpi maxillares articulo ultimo triangulari, apice acuto; tarsi articulo 4^{to} longe lobato, ungues simplices; abdomen articulis nullis phosphoreis, ultimo superiore apice truncato, non emarginato.

The first division of this genus approaches very closely in form to the last, and is distinguished only by the form of the last superior abdominal segment, and the absence of any light giving spot. The males are distinguished by the additional anal segment, which, with the preceding, is protected by the large superior segment.

*Corpus elongatum.

1. *E. nigricans*, fusco-nigra, thorace apice rotundato basi truncato, lateribus subito reflexis, apiceque punctatis, macula utrinque rosea ornato, disco ante basin angulatim impresso, elytris confertissime subtiliter granulatis. Long. .2—25.

Lampyrus nigricans, Say. J. Ac. Nat. Sc. 3, 179.

? *Lampyrus obscura* Fabr. Syst. El. 2, 100.

Abundant everywhere; the thoracic spot is sometimes obsolete. The granulation of the elytra is much finer than in the next species. The margin of the thorax is commonly fuscous but is sometimes pale.

2. *E. decipiens*, fusco-nigra, thorace apice rotundato, basi truncato, lateribus subsubito reflexis, roseo-testaceis, cum apice scabris, disco obsolete carinato, ante basin transverisim impresso, elytris confertim minus subtiliter granulatis. Long. .25.

Lampyrus decipiens Harris. Trans. Hartford Nat. Hist. Soc. 74.

Northern and Southern States; the elytra have two slightly elevated lines. I have one specimen from Georgia in which there is a wide impression at the middle of the thorax and the carina is wanting, it may possibly be a distinct species, but is such an obscure family I am unwilling to separate it on a single specimen.

3. *E. minuta*, linearis, fusco-nigra, thorace apice rotundato, basi subemarginato, lateribus vix reflexis, roseo-testaceis, cum apice punctatis, disco subtiliter canaliculato, elytris minus subtiliter granulatis. Long. .17.

Georgia; rare. This small species is readily distinguished by its narrower form; the disc of the thorax is much more even than in the preceding species.

**** Corpus ellipticum.**

4. *E. corrusca*. *Lampyris corrusca* Linn. Syst. Nat.; Oliv. 28, tab. 2, 14; Fabr. Syst. El. 2, 100. *Pyratomena fenestralis* Mels. Pr. Ac. Nat. Sc. 2, 304. Middle and Southern States.

5. *E. autumnalis* Mels. Pr. Acad. Nat. Sc. 2, 303. Middle States.

6. *E. lacustris*, elongato-elliptica, fusco-nigra, thorace semicirculari, disco convexo, lateribus parce punctatis, depressis, linea utrinque arcuata pallida ornatis, elytris confertissime subtiliter granulatis linea elevata subobliqua notatis. Long. .3.

Lake Superior; narrower than *E. autumnalis*, and with the sides of the thorax less punctured. It is much smaller and a little narrower than *E. corrusca*, and the pale arched spot of the thorax is much narrower.

PHOTINUS Lap. emend.

Antennæ compressæ, tenues, 11-articulatæ; palpi maxillares articulo ultimo triangulari, tarsi articulo 4^{to} longe lobato, ungues simplices, abdomen articulis tribus phosphoreis, ultimo superiore apice truncato, inferiore emarginato segmentulo anali aucto.

The anal segment here exists in both sexes, but from the drying of the abdomen the 7th segment is sometimes retracted. The males have the superior terminal segment extending beyond the inferior segment, as in the other genera.

1. *P. pyralis*, piceo-vel nigro-fusca, thorace semicirculari, basi truncato, utrinque roseo-maculato, macula centrali nigra ornato, canaliculato, marginibus late punctatis, lateribus subito reflexis, elytris confertissime granulatis, margine, sutura scutelloque pallidis coxis femoribusque flavis. Long. .38—.60.

Lap. An. Ent. Pr. 2, 141.

Lampyris pyralis Lin. Syst. Nat: De Geer 4, 52: tab. 17, 7; Fabr. Syst. Ent. 2, 99; Syst. El. 2, 101. Oliv. 28, 2, 11.

Lampyris centrata Say. J. Ac. Nat. Sc. 5, 162. *Lamp. rosata* Germ. Ins. Nov. 62.

Rare in the middle States, but very common in the Southern States; the thoracic spot is sometimes very small; the female only differs from the male by the abdomen.

2. *P. ardens*, fusca vel picea thorace semicirculari, basi truncato, angulis posticis acutis, sub-productis, margine laterali apicalique pallidis, punctatis, lateribus subito reflexis, disco subtiliter canaliculato, ante basin late impresso, elytris minus subtiliter granulatis, margine, suturaque pallidis. Long. .3—.45.

Lake Superior; the feet are pale fuscous, with the base of the femora yellow; the thorax is sometimes carinated at base; such a variety is the *Pygolampis tædifer* of my Catalogue in Agassiz' Lake Superior.

3. *P. casta*, pallida, thorace semicirculari basi truncato, angulis posticis non productis, lateribus minus subito reflexis, cum apice late punctatis, disco lævi, roseo, ante basin vix foveato, elytris subtiliter granulatis: antennis capite postpectoreque fuscis. Long. .3.

Habersham Co., Georgia, May. A very pretty little species; the female is similar to the male.

4. *P. scintillans*, fusca, thorace pallido semicirculari, basi truncato, angulis posticis non productis, lateribus subsubito reflexis cum apice punctatis, disco obsolete biimpresso, roseo, medio infuscato, elytris subtilissime granulatis, margine, sutura, scutelloque pallidis, pedibus testaceis. Long. .32.

Lampyrus scintillans Say. J. Ac. Nat. Sc. 5, 163.

Middle States. This species is only distinguished from the next by the elytra being more finely and almost indistinctly granulate; the female has short elytra, and the antennæ but little longer than the thorax.

5. *P. marginella*, fusca, thorace pallido, semicirculari, basi truncato, angulis posticis non productis, marginibus subito reflexis, apiceque late punctatis, disco vix canaliculato, roseo, macula centrali fusca, elytris subtiliter granulatis, margine sutura scutelloque pallidis, pedibus testaceis. Long. .32.

This is the common northern species, and is also found in Missouri. The female only differs from the male by the last abdominal segment. Were it not for the difference in sexual characters, I should not have separated this from the last species, from which it can hardly be distinguished; the fuscous spot of the thorax is sometimes wanting.

6. *P. punctulata*, fusco-picea, thorax pallido, semicirculari, basi truncato, angulis posticis non productis, marginibus minus subito reflexis apiceque punctatis, disco roseo, canaliculato, subtiliter punctato, macula centrali apiceque infuscatis, elytris confertim granulatis, margine sutura, scutelloque pallidis, femoribus coxisque testaceis. Long. .37.

Missouri Territory; the female has short elytra; the antennæ are nearly as long as in the male.

7. *P. consanguinea*, fusco-picea, thorace semicirculari, pallido, basi late emarginato, angulis posticis productis, disco roseo, medio nigro-vittato, vix canaliculato, marginibus subito reflexis, apiceque punctatis, elytris confertim granulatis, margine suturaque pallidis, femoribus testaceis. Long. .32—42.

Southern States, abundant; the female is similar to the male, but has only the antepenultimate segment of the abdomen luminous.

8. *P. obscurella*, fusco-picea, thorace semicirculari, basi late emarginato, angulis posticis vix productis, lateribus testaceis subito reflexis, apiceque punctatis, disco vix impresso, toto fuscò, elytris confertim granulatis, margine suturaque anguste pallidis. Long. .43

One specimen; Missouri Territory. Very much resembles *P. ardens*, but differs essentially in having the base of the thorax emarginate.

9. *P. lineella*, linearis, fusco-picea, thorace pallido semiovali, basi truncato, angulis posticis subproductis, marginibus subito reflexis, apiceque anguste punctatis, disco vix impresso roseo, medio nigro-vittato, elytris confertim granulatis, margine suturaque anguste pallidis. Long. .27.

Georgia, rare; this species is much narrower than any of the preceding, and the sides of the thorax are subparallel towards the base. Female unknown.

10. *P. vittigera*, fusco-picea, thorace brevior, semicirculari pallido, basi subemarginato, angulis posticis leviter productis marginibus late minus subito reflexis, apiceque punctatis, disco roseo, subcanaliculato, vitta lata nigra ornato, elytris subtiliter granulatis, margine suturaque pallidis. Long. .48.

Georgia, rare. Resembles *P. consanguinea*, but the thorax is shorter and the elytra less distinctly granulated.

PYRACTOMENA †Dej.

Antennæ 11-articulatæ, tenues, subcompressæ, articulo ultimo versus apicem sinuato; palpi maxillares articulo ultimo triangulari apice acuto, tarsi articulo 4^{to} longe lobato, ungues simplices; abdomen articulis tribus subtus phosphoreis, ultimo superiore apice emarginato.

The males are distinguished by the last superior abdominal segment being produced beyond the inferior segment, as in the other genera; the anal segment is visible only in the male, and is emarginate.

* Elytra late marginata.

1. *P. flavocincta*, fusco-picea thorace pallido antice subangulato, basi late emarginato, angulis posticis extrorsum productis, lateribus subito late reflexis, margine fusco, disco subcarinato, medio late infuscato, elytris alutaceis, costulatis, margine late depresso, suturaque angusta pallidis. Long. .45.

Georgia. The angles of the thorax being produced obliquely outwards, distinguish this species from the next.

2. *P. angulata*. *Lampyrus angulata* Say. J. Ac. Nat. Sc. 5, 162; *Lampyrus lucifera* Mels. Pr. Ac. Nat. Sc. 2, 304. Middle and Western States.

** Elytra minus late marginata.

3. *P. angustata*, fusco-picea, thorace apice angulato, pallido, basi vix emarginato, angulis posticis non productis, lateribus late subito reflexis, disco subtiliter carinato, utrinque roseo, medio longitudinaliter infuscato, elytris subtiliter granulatis, costulatis, margine angusto reflexo, suturaque tenui pallidis. Long. .42—55.

Southern States. The thorax is usually longer than wide; in one specimen (probably distorted) the reverse is the case.

4. *P. linearis*, elongata, fusca, thorace pallido apice vix angulato, basi truncato, angulis posticis vix productis, lateribus subito reflexis leviter infuscatis, disco carinato pone apicem late infuscato, elytris distinctius granulatis, costulatis, margine angusto pallidore. Long. .37.

Georgia; two specimens.

5. *P. borealis*, fusca, thorace pallido, apice angulato, basi late emarginato, angulis posticis leviter productis, lateribus late reflexis, infuscatis, disco subcarinato, utrinque roseo, medio longitudinaliter infuscato, elytris

alutaceis, constulatis, anguste marginatis, margine suturaque tenuissime pallidis. Long. .4—58.

Lampyris borealis Randall. Bost. Journ. Nat. Hist. 2, 16.

Lake Superior, Cleveland and Maine. The female is luminous only at the sides of the segments. The margin of the elytra of the male is much narrower, and the sides are less suddenly deflexed; the male is *P. falsa* of my catalogue in Agassiz' Lake Superior.

PHAUSIS.

Antennæ 12-articulatæ breves, serratæ, compressæ; articulis 1 et 2 parvis, ultimo subulato minutissimo, vix conspicuo; palpi minuti; tarsi articulo 4^{to} brevi bilobato, unguiculari longo, ungues simplices; abdomen articulis tribus phosphoreis, segmento ultimo superiore emarginato.

1. *P. reticulata*. *Lampyris reticulata* Say. J. Ac. Nat. Sc. 5, 163. *L. brevicornis* †Dej. Cat. Georgia, rare.

PHOTURIS †Dej.

Antennæ 11-articulatæ, tenues, elongatæ, articulis 2 et 3 brevioribus; palpi maxillares articulo ultimo triangulari acuto, labiales articulo ultimo transverso lunato: tarsi articulo 4^{to} longe lobato, ungues externi fissi, interni simplices; abdomen articulis 3 ultimis phosphoreis, segmento superiore ultimo apice rotundatis.

This very distinct genus forms the 3d division of Laporte's genus Photinus, (An. Ent. Fr. 2, 144,) and to it he has given the uncouth name of *Téléphoroides*; fortunately his Gallic patriotism has led him to print this as a French word, so that we are enabled to replace it by the hitherto unpublished name of Dejean. While on this subject I may add, that Laporte in this, as in almost every other instance, has completely overlooked the real distinguishing characters of the genus.

1. *P. pensylvanica*. *Lampyris pensylvanica* De Geer 4, 53, tab. 17, 8, Oliv. 25, 1, 8. Enc. Meth. 7, 455; *Lamp. versicolor* Fabr. Syst. El. 2, 105; *Photinus pensylvanicus* Laporte. An. Ent. Soc. Fr. 2, 144.

Abundant in every part of the United States; usually the elytra are marked with a discoidal pale vitta extending beyond the middle. In Southern specimens this vitta is occasionally wanting; these are *Photuris lineaticollis* of Dejean's Catalogue.

2. *P. frontalis*, picea, fronte valde concava, thorace pallido sat dense punctato marginibus late reflexis, vitta media fusca apicem non attingente notato, elytris confertim minus subtiliter punctatis, margine, sutura scutelloque pallidis, femoribus basi pallidis. Long. .4.

One specimen; Georgia. The punctuation is coarser and less dense than in *P. pensylvanica*.

3. *P. divisa*, picea, fronte leviter concava, thorace pallido, sat dense punctato, marginibus late subito reflexis, disco utrinque macula magna fusca

notata, elytris confertim punctatis, margine sutura, scutelloque pallidis, femoribus testaceis. Long. .42.

Missouri Territory. The third joint of the antennæ is longer than the 2d.

4. *P. congener*, picea, capite testaceo, valde concavo, thorace pallido, confertissime punctato, marginibus late subito reflexis, disco rufo utrinque infuscato, elytris confertissime punctatis, margine sutura, scutelloque pallidis, femoribus pallidis, apice fuscis. Long. .43.

One specimen; Georgia; antennæ with the third joint a little longer than the second.

Div. 2^{nda} *Telephori*.

Abdomen sæpius 6-articulatum,* segmentis nullis phosphoreis; antennæ distantes; tarsi articulo 4^{to} usque ad basin fissio.

* Antennæ articulo 2^{do} minuto.

CHAULIOGNATHUS Htz.

Palpi articulo ultimo paulo dilatato; antennæ articulo 2^{do} minuto, 3^{io} sequentibus brevioribus; thorax margine integro; ungues simplices.

For the curious structure of the maxilla of this genus see Hentz in Trans. Amer. Phil. Soc. 3, 460.

1. *C. pensylvanicus*. *Telephorus pensylvanicus* De Geer. 4, tab. 17, 15, *Cantharis americana* Forster. Cent. Ins. 50; *Canth. bimaculata* Fabr. Ent. Syst. 1, 216; Syst. El. 1, 298; *Tel. bimaculatus* Ol. 26, 2, 11; *Chauliog-nathus bimaculatus* Hentz. Trans. Am. Phil. Soc. 3, 461. Abundant everywhere.

2. *C. Hentzii*, luteus, thorace quadrato, subtransverso, lateribus anguste marginatis, medio nigro-vittato, subcanaliculato, elytris macula utrinque postica, sæpe ad basin extensa scutelloque nigris, subtus piceus, femorum posticorum basi abdomineque testaceis. Long. .4.

Very similar to the preceding, but the thorax is not margined in front, and the black spot extends to the apex, the head and antennæ are black. Northern and Southern States; rare.

3. *C. marginatus* Hentz. l. l. 3, 460; *Cantharis marginata* Fabr. Ent. Syst. 1, 216; Syst. El. 1, 298.

Abundant, especially in the Southern States; a variety in which the black occupies the whole of the elytra, leaving only a narrow marginal and sutural line yellow, is the *Callianthia philadelphica* Dej. Cat.

POLEMIUS.

Palpi articulo ultimo triangulari; antennæ compressæ, serratæ, articulo 2^{do} minuto, 3^{io} sequentibus non minore: thorax margine laterali ad medium interrupto: ungues simplices externo postico ad basin dilatato.

*When it has seven articulations, the last is small and presents the appearance of an anal joint.

1. *P. laticornis*. *Cantharis laticornis* Say. J. Ac. Nat. Sc. 5, 168; *Telephorus dubius* Mels. Pr. Ac. Nat. Sc. 2, 304. Middle States; rare.

2. *P. limbatus*, ater thorace subtransverso, rufo antice infuscato, lateribus marginatis, rectis pallidis, medio minute incisus, angulis posticis acutis, elytris subtilius scabris, margine suturaque pallidis, abdominis segmentis pallido marginatis, mandibulis tibiisque anticis testaceis. Long. .22.

New Jersey; Mr. Guex. The antennæ are less strongly serrate than in the preceding.

3. *P. incisus*, ater, thorace quadrato, antrorsum vix angustato, lateribus anguste marginatis testaceis, ad medium acute incisus, disco nigro valde tripresso, elytris scabris. Long. .25.

Georgia; rare. Easily distinguished by its less transverse thorax, concave in the middle, less narrowed, but more rounded at the apex, and more suddenly incised at the middle of the lateral margin, which is much narrower.

SILIS Charpentier, Hor. Ent.*

Palpi articulo ultimo vix dilatato; antennæ articulo 2^{ndo} minuto, 3^o sequentibus æquali; thorax margine ad angulum posticum profunde inciso, appendice clavato inferne munito; unguis ad basin vix dentatis.

a. Antennæ valde serratæ.

1. *S. bidentata*. *Cantharis? bidentata* Say. J. Ac. Nat. Sc. 5, 169; *Silis lepida* ‡Dej. Cat.

Middle and Southern States. Say's description gives the second joint of the antennæ as being half the length of the third; it is in reality much smaller.

b. Antennæ tenues, elongatæ, vix serratæ.

2. *S. longicornis* Lec. Agassiz Lake Superior, 230. Sault Ste. Marie.

2. *S. difficilis* Lec. l. c. 230.

Sta. Fe and Lake Superior; the teeth at the posterior angle of the thorax are much more prolonged than in the last mentioned species.

4. *S. pallens*, piceus, thorace elytrisque flavo-pallidis, illo transverso, marginato, medio fovea lata nigra minus profunde impresso, ad angulos posticos subito inciso, dente anteriore obtuso, posteriore acuto tenui, elytris subtiliter scabris, sutura, margine scutelloque nigris. Long. .2. One specimen, San Francisco.

** Antennæ articulo 2^{ndo} maiusculo.

TELEPHORUS Geoff.

Cantharis Fabr.

Palpi articulo ultimo dilatato, securiformi; antennæ articulo 2^{do} tertio sesqui brevior caput pone oculos vix angustatum; thorax margine integerrimo.

This genus varies very much in the form of the claws of the tarsi; which are sometimes entire, sometimes toothed at the base, and sometimes bifid; the two latter forms run into each other, to such an extent, that this character cannot

* I give the citation to Charpentier, as his description (1825) appears to be the earliest. Megerle instituted the genus in 1821 in Dejean's Catalogue, which cannot of course be quoted as authority.

be made use of in dividing the genus. Those, however, which have only the exterior unguis of the two posterior pairs toothed may form a separate section.

a. Ungues posteriores externi dente basali armati.

1. *T. rotundicollis*. *Cantharis rotundicollis* Say. J. Ac. Nat. Sc. 5, 165. Rare throughout the Atlantic slope of the United States.

2. *T. Curtisii* Kirby. F. Bor. Am. 4, 246. Lake Superior.

3. *T. tibialis*, rufo testaceus, cinereo-pubescent, thorace transverso marginato, subcanaliculato versus basin subangustato, elytris fuscis, subtilissime scabris, tibiis tarsisque obscuris, antennis fuscis basi rufis. Long. .75.

California, San Diego. This fine species differs from the preceding by its broader thorax; the head is immaculate; the abdomen is a little darker than the pectus.

4. *T. consors*, rufo-testaceus, cinereo-pubescent, thorace longiusculo, marginato, subcanaliculato, versus basin subangustato, elytris fuscis subtilissime scabris, tibiis tarsisque obscuris, antennis fuscis basi rufis. Long. .57.

California, San Diego; only differs from the last by its long thorax; the margin in front is broad, and the apex rounded.

5. *T. latus*, niger, cinereo-pubescent, ore, pedibus thoraceque late flavis, hoc quadrato, antrorsum subangustato, undique anguste marginato, elytris scabris, substriatis. Long. .3.

San Francisco, California; one specimen.

6. *T. grandicollis*, niger, cinereo-pubescent, ore, thoraceque late rufis, hoc elytris non angustiore transverso, canaliculato, marginato, lateribus valde rotundatis, elytris subtiliter scabris, abdomine obscure testaceo. Long. .28.

San Francisco; one specimen.

7. *T. fidelis*, niger, subtiliter pubescens, mandibulis, thoraceque rufo-flavis, hoc transverso, marginato, vix canaliculato, lateribus paulo rotundatis, ad apicem nigro, elytris scabriusculis, abdomine flavo. Long. .33.

Santa Fe; Fendler. This species differs from all the preceding species in having the internal claw of the posterior tarsi somewhat dilated at base; it is similar in form to the next species, but the second joint of the antennæ is proportionally much shorter.

8. *T. collaris*, niger, tenuiter pubescens, ore thoraceque flavis, hoc transverso, minus late marginato lateribus subrotundatis, elytris scabris, antennarum basi testaceo. Long. .25.

Missouri Territory and Illinois; the basal joints of the antennæ are sometimes very dark; the abdomen is entirely black.

9. *T. bilineatus* Lec. Agassiz Lake Superior, 229. *Cantharis bilineatus* Say. J. Ac. Nat. Sc. 3, 182.

Middle States and Lake Superior. The postpectus is usually fuscous, but a variety from the Southern States has that part as light colored as the abdomen.

10. *T. divisus*, niger, griseo-pubescent, ore thoraceque flavis, hoc quadrato, lateribus rectis angulis rotundatis posticis rectis, margine anguste reflexo, disco subcanaliculato, maculis duabus magnis fere confluentibus notato, utrinque versus angulos anticos subexcavato, elytris substriatim scabris. Long. .3.

California, San Francisco.

11. *T. impressus*, niger, thorace transverso, latius marginato, disco subcanaliculato ante basin late impresso, disco antice profunde transversim impresso, lateribus flavis, elytris valde punctato-scabris. Long. .24.

New York; Mr. Guex. One specimen; resembles in appearance *T. rectus*, lineola and several others of third division.

12. *T. tuberculatus*, niger, thorace transverso, valde marginato, subcanaliculato, lateribus flavo-rufis subrotundatis, antice transversim impressis, tuberculo parvo versus angulos anticos notatis, elytris valde punctato-scabris. Long. .23.

Georgia; one specimen. Very similar to the last; the sides of the thorax are more rounded; the little tubercle is rather on the disc than the marginal part of the thorax.

b. Ungues omnes simplices.

13. *T. brevicollis*, niger, mandibulis, thoracisque lateribus flavis; thorace valde transverso, marginato, antice vix impresso, lateribus subrotundatis, elytris minus subtiliter punctato-scabris. Long. .22.

One specimen; Georgia.

14. *T. undulatus*, niger, thorace roseo-pallido, valde transverso, late marginato, antice subangustato, lateribus repandis, canaliculato, medio nigro, elytris valde scabris, margine, sutura, humeris abdominisque margine testaceo. Long. .3.

Georgia; M. Guex. The thorax is as wide as the elytra; the disc has a short transverse impression on each side of the middle. This may possibly be *Cantharis invalida* Say. Bost. Journ. Nat. Hist. 1, 159, but the form of the thorax is not mentioned, and Say's insect appears to have been much smaller.

c. Ungues omnes dentati, sæpius fere fissi.—*Rhagonycha* Esch.

15. *T. dentiger*, niger, mandibulis thoraceque testaceis, hoc transverso late marginato, punctato, canaliculato, lateribus rotundatis, disco utrinque pone medium late infuscato, elytris scabris, epipleuris abdominisque margine testaceis. Long. .35.

One specimen; Maryland. Same size and form as the following, but at once distinguished by its punctured thorax and the shortness of the ungual tooth.

16. *T. carolinus*. *Cantharis carolina* Fabr. Syst. El. 1, 296. Middle and Southern States.

17. *T. curtus*. *Podabrus curtus* Lec. Agassiz Lake Superior, 229. ?*Cantharis precomis* Say. Bost. Journ. Nat. Hist. 1, 159.

18. *T. cinctellus*, subtus testaceus, capite postice nigro, thorace flavo, transverso, anguste marginato, lateribus rectis, elytris confertim scabropunctatis piceis, sutura margine scutelloque pallidis, antennis obscuris basi pedibusque flavis. Long. .2.

Georgia and Missouri Territory. This and all the following species have the tooth of the claw almost equal to the claw itself.

19. *T. dichrous*, niger, fronte thoraceque flavis hoc latitudine vix brevior, lateribus vix rotundatis, margine reflexo ad medium angustiore disco ad latera antice paulo excavato, versus basin in medio paulo deplanato, elytris scabro punctatis, pedibus antennarumque basi rufis. Long. .2. Missouri Territory.

20. *T. flavipes*, niger, fronte thoraceque flavis, hoc quadrato, lateribus rectis margine reflexo ad medium angustissimo, disco nigro-vittato, postice obsolete canaliculato ad latera antice vix excavato, elytris subtilius scabro punctatis, antennarum basi pedibusque rufis. Long. .22.

Missouri Territory. The thorax exactly resembles that of *T. lineola*, but the color of the mouth and feet at once distinguishes this species; the elytra are less coarsely scabrous than in *T. lineola*.

21. *T. lineola*. *Cantharis lineola* Fabr. Syst. El. 1, 301; *Cantharis parallela* Say. J. Ac. Nat. Sc. 5, 168. Common in the Northern and Southern States.

22. *T. rectus* Mels. Pr. Ac. Nat. Sc. 2, 305.

Middle and Southern States. Varies, with the suture and tibia at base testaceous; also with the femora fuscous, tibiae and tarsi pale. I suspect that *Cantharis rufipes* Say. J. Ac. Nat. Sc. 3, 182, is this variety, but his description is excessively bad.

23. *T. Sayi*, niger, thorace subtransverso, antrorsum subangustato, angulis omnibus rotundatis, lateribus tenuiter marginatis, disco æqualiter convexo, nigro-vittato, elytris scabro-punctatis. Long. .27.

One specimen, New York. Differs from *T. lineola* by the much narrower reflexed thoracic margin, which is almost obsolete at the middle. The next species has a thorax not at all transverse, the black part is much broader, the reflexed margin less narrow, and the disc is laterally excavated before the middle.

24. *T. angulatus*. *Cantharis angulatus* (!) Say. J. Ac. Nat. Sc. 3, 180. Pennsylvania, Bristol.

25. *T. cruralis*, niger, ore thoraceque flavis, thorace transverso antrorsum subangustato, angulis omnibus subrotundatis, lateribus rectis tenuiter marginatis, disco æqualiter convexo, nigro-lineato, elytris subtilius scabris, testaceo-marginatis pedibus flavis tibiis tarsisque fuscis. Long. .26.

One specimen, Georgia. Very much resembles in form and size *T. lineola*, &c., but very distinct; the lateral margin of the thorax becomes more indistinct towards the anterior angle.

26. *T. marginellus*, niger ore thoracisque margine flavis, thorace subtransverso, antrorsum subangustato, angulis omnibus subrotundatis, lateribus leviter rotundatis marginatis, disco æqualiter convexo nigricante, elytris scabris, sutura margineque tenuiter pallidis, antennarum basi genibusque testaceis. Long. .23.

Georgia, one specimen. The margin of the thorax is more distinct and equally reflexed anteriorly; most nearly resembles *T. rectus* (Mels.) but the sides of the thorax are not straight, the sides of the disc are not excavated anteriorly, and the margin is wider.

27. *T. excavatus*, niger, thorace flavo quadrato, antrorsum angustato, lateribus rectis tenuiter valde marginatis, angulis vix rotundatis, disco late canaliculato, nigro-vittato, antice versus latera valde excavato, ad apicem subtilissime punctulato, elytris valde scabris, pedibus fuscis, tibiis tarsis mandibulisque pallidis. Long. .26.

A very common species, which nearly resembles *T. rectus*, but the thorax is more distinctly margined, the disc much more excavated, and the black part is much narrower. The elytra are sometimes black, sometimes margined with testaceous. This, too, may be *Canth. rufipes* Say.

28. *T. imbecillis*, piceus, ore thoraceque flavis, hoc vix transverso, antrorsum subangustato, angulis posticis non rotundatis, margine anguste reflexo,

disco nigro lineato, utrinque antice late excavato, elytris scabris, sutura marginique testaceis, pedibus pallidis, genubus infuscatiss. Long. .26.

A common species, which resembles very much *T. rectus*, but the elytra are more scabrous.

29. *T. scitulus* Lec. Agass. Lake Sup. 229. *Canth. scitula* Say. J. Ac. Nat. Sc. 5, 168; *T. nigriceps* Lec. l. c. 230.

Middle and Northern States. My *Teleph. nigriceps* is only a distorted specimen of this species, which is much paler than usual.

30. *T. longulus*, pallidus thorace latitudine longiore, tenuiter marginato, angulis posticis non rotundatis, disco late canaliculato, antice ad latera excavato, elytris substriatim scabris, antennis fuscis, basi pallidis. Long. .28.

One specimen, Niagara.

31. *T. pusillus*, niger, mandibulis pedibusque flavis, thorace vix transverso, marginato, lateribus rectis, flavis, disco subtiliter canaliculato, nigro, elytris scabris, epipleuris pallidis. Long. .15.

One specimen, New York. The thoracic margin is not broader in front than behind. Resembles much *T. rectus*, but is much smaller; only the first joint of the antennæ is pale.

32. *T. vilis*, niger, thorace subtransverso, marginato, lateribus, flavis, disco nigro, antice ad latera late excavato, postice ad angulos posticos rectos foveato, elytris valde scabro-punctatis. Long. .15.

New York and Upper Mississippi. The margin of the thorax is broader towards the anterior angles.

33. *T. fraxini*. *Cantharis fraxini* Say. J. Ac. Nat. Sc. 3, 181: *Telephorus nigrita* Lec. Agass. Lake Sup. 229: *Malthacus mandibularis* Kirby. F. Bor. Am. 248. Abundant at Lake Superior and Mackinaw; found also in Pennsylvania: some of the specimens have the maxillary palpi much less dilated than is usual in this genus; they are probably females.

PODABRUS † Fischer.

Palpi articulo ultimo dilatato, securiformi, vel triangulari, antennæ articulo 2^{do} tertio vix brevior, caput pone oculos valde angustatum, thorax margine integerrimo ad apicem truncatus vel emarginatus.

I can find no description of this genus except in the synopsis at the end of Westwood's introduction to the modern Classification of Insects, p. 27. If this be the earliest publication of the characters of the genus, the name of Westwood must of course be substituted in the place of Fischer, who in his Ent. Russ. only mentions the genus by name, without giving any description. The species of the first division all have a deep transverse impression before the middle of the thorax. The second division is equivalent to Kirby's genus *Malthacus*.

a. Thorax latius marginato; ungues fere fissi: palpi art. ult. securiformi.

1. *P. tricostatus*. *Cantharis tricostata* Say. Bost. Journ. Nat. Hist. 1, 158: *Telephorus Bennetii* Kirby F. Bor. Am. 249. Vermont, Prof. Adams; Pennsylvania, Dr. Melsheimer.

2. *P. basilaris*. *Cantharis basilaris* Say. J. Ac. Nat. Sc. 3, 181. Middle States, rare.

3. *P. flavicollis*, niger, fascia frontali thoraceque flavo-pallidis, hoc transverso, subcanaliculato, parcius punctato, lateribus latius marginatis, sub-

rotundatis, elytris confertissime scabro-punctatis, scutello, sutura, margine, coxis femorumque basi pallidis. Long. .47.

Middle and Southern States; rare. The antennæ are black, with the under surface of the two basal joints pale: the head is very densely punctured.

4. *P. discoides*, niger, thorace pallido transverso, late marginato, lateribus leviter rotundatis, minus parce punctato, subcanaliculato, medio nigro-maculato, elytris confertissime scabris sutura margineque tenuibus pallidis, antennarum basi femoribusque pallidis, his apice piceis. Long. .47.

New York: one specimen, Mr. Guex. The head is thickly punctured: the spot on the thorax does not extend farther than the transverse impression towards the apex.

5. *P. modestus* Lec. Agass. Lake Sup. 228; *Cantharus modestus* Say, J. Ac. Nat. Sc. 3, 179. New York and Lake Superior; the fuscous spot of the thorax sometimes occupies nearly the whole surface; the feet and antennæ vary from rufous to dark fuscous.

6. *P. diadema* Dej. Cat. 118: *Cantharis diadema* Fabr. Syst. El. 1, 298. Lake Superior, Middle and Southern States. What I consider as this species is distinguished from all the preceding by the head being much less densely punctured, the thorax is subtransverse and smooth, and the elytra without pale margin; the feet are always black. Length .46.

7. *P. pruinosis*, niger cinereo-pubescent, capite thoraceque rufis, illo dense punctato, hoc subtransverso, late marginato, lateribus leviter rotundatis, canaliculato, ante medium subtiliter punctato, elytris subtiliter rugose scabris, abdominis apice lateribus pedibusque rufis. Long. .52.

Oregon; Mr. Wilcox. This species bears the same name in the Berlin Museum, to which it was also sent by Mr. Wilcox.

8. *P. comes*, niger cinereo-pubescent, capite thoraceque rufis, illo dense punctato, hoc subtransverso, late marginato, lateribus rotundatis, canaliculato, ante medium subtiliter punctato, elytris minus subtiliter rugose scabris, coxis vix testaceis. Long. .4.

California, San Francisco. Very similar to the last, but in addition to the characters of the diagnosis, the sides of the thorax are more rounded, and the posterior angles are small and prominent.

9. *P. tomentosus*. *Cantharis tomentosa* Say, J. Ac. Nat. Sc. 5, 165; *Podabrus rufiolus* Mels. Pr. Ac. Nat. Sc. 2, 304. Pennsylvania, Dr. Melsheimer. My specimen has the abdomen rufous, with a small fuscous spot at base.

10. *P. rugosulus* Lec. Agass. Lake Superior, 229. Very common in every part of the United States, and is usually mistaken for *P. diadema*, with the description of which it does not at all agree. The thorax is narrowed in front, and the whole surface is strongly punctured.

11. *P. frater*, niger capite confertim punctato, mandibulis, fasciaque suboculari testaceis, thorace subtransverso, antrorsum vix angustato, lateribus late marginatis subrotundatis rufis, disco canaliculato, ante medium subtilius punctato, elytris valde rugose scabris. Long. .4.

One specimen; Georgia. Larger than the last, which it very closely resembles; the thorax, however, is not narrowed in front, and the convex part of the disc is smooth; as in the preceding, the elytra are very rough, with two indistinct lines; the head is thickly punctured.

12. *P. porticollis*, piceus capite parcius punctato, ore flavo, thorace flavo capite angustiore, latitudine non brevior, parce punctato antrorsum angustato, lateribus subrotundatis late marginatis, medio canaliculato, nigrovittato, elytris dense rugosis, sutura, margine, abdominis marginibus pedibusque pallidis, femoribus sæpius apice nigris. Long. .35.

A common Southern species; the black on the femora extends about one-third of the length; the variety without this femoral spot is rare.

13. *P. brunnicollis*. *Cantharis brunnicollis* Fabr. Syst. El. 1, 298. Georgia, rare. This species nearly resembles the last, but the thorax is longer, not at all rounded on the sides, which are parallel, and it has no dorsal dark spot. The legs are black; the femora rufous at base for two-thirds their length.

b. Thorax angustius marginato, unguis basi dentati; palpi art. ult. triangulari.

14. *P. cavicollis*, supra pallidus, capite dense punctato pone oculos nigro, thorace parce punctato, elongato, lateribus rectis, angustius marginatis, antice posticeque excavatis, disco longitudinaliter valde excavato, leviter infuscato; elytris minus subtiliter scabro-punctatis, subtus piceus, antennarum basi pedibusque pallidis. Long. .25.

San Diego, California.

15. *P. puncticollis*. *Podabrus marginellus* Lec. Agassiz' Lake Superior, 229. *Malthacus puncticollis* Kirby, E. Bor. Am. 247. Eagle Harbor, Lake Superior.

16. *P. punctatus* Lec. ibid. 229. With the preceding.

17. *P. puberulus* Lec. l. c. 229. Lake Superior.

20. *P. lævicollis* Lec. l. c. 227; *Malthacus lævicollis* Kirby. F. Bor. Am. 248. Lake Superior: the disc of the thorax is sometimes rufous, black only at the base and apex.

MALTHINUS Latr.

Antennæ tenues, articulo 2^{do} tertio vix brevior; palpi maxillares articulo 2^{do} elongato, ultimo ovali apice acuto; tarsi postici articulis gradatim brevioribus, 4^{to} omnium bilobato, unguiculari brevi, unguibus integris; caput pone oculos angustatum; elytra abdomine breviora.

a. Caput pone oculos valde angustatum, elytra seriatim punctata.

1. *M. occipitalis*, pallide flavus, capite pone oculos nigro, thorace non transverso, antrorsum angustato, lateribus rotundato, minus dense punctato, valde canaliculato medio fusco vittato, antice transversim impressis, elytris sat dense seriatim punctatis, testaceis, apice anguste flavis. Long. .1.

S. Carolina, Dr. Zimmerman.

2. *M. difficilis*, pallide flavus, capite pone oculos vix infuscato, thorace subtransverso, antrorsum angustato, lateribus rotundato, parce punctato, canaliculato, antice transversim impresso, elytris albicantibus, seriatim punctatis, apice late flavis. Long. .1.

These two species are very closely allied, yet the differences in the form of the thorax are sufficient to distinguish them. I have received them from Dr. Zimmerman.

b. *Caput pone oculos modice angustatum ; elytra confuse punctata.*

3. *M. niger*, niger vix subtiliter pubescens, thorace valde transverso, lateribus rectis, angulis rotundatis, elytris subtilius scabro-punctatis, antennis, abdominis apice, pedibusque piceo-testaceis. Long. .15.

Lake Superior ; one male. The last superior joint of the abdomen is elongate, concave beneath, and has a short terminal appendage ; the penis is exerted, and terminates in two large acute lobes.

4. *M. transversus*, fuscus pubescens, thorace quadrato, angulis prominulis, lateribus rectis, obsolete punctulato, ad medium transversim impresso, elytris subtilissime punctulatis, antennarum basi testacea. Long. .12. Niagara.

5. *M. concavus*, fuscus pubescens, thorace rufescente quadrato, angulis prominulis, lateribus rectis, obsolete punctulato, subcanaliculato, ad angulos anticos excavato, elytris subtilissime punctulatis, antennarum basi testacea. Long. .13. New York.

6. *M. exilis* Mels. Pr. Ac. Nat. Sc. 2, 305. Pennsylvania and Georgia.

7. *M. fragilis*, fuscus vix pubescens, thorace transverso, tenuiter marginato, lateribus rotundatis, disco ad medium transversim impresso, elytris vix subtiliter punctulatis, antennarum basi pedibusque pallidis. Long. .1.

S. Carolina and Lake Superior ; differs from the preceding by the fuscous thorax, which is more rounded on the sides.

8. *M. fuscus*, fuscus vix pubescens, thorace transverso, tenuiter marginato, angustis vix rotundatis, lateribus rectis late impressis, elytris subtilissime scabris. Long. .12.

One specimen, San Francisco. The antennæ and feet are entirely fuscous.

8. *M. parvulus*, fusco-pallidus, parce pubescens, capite nigro, thorace transverso lateribus rotundatis, non impresso, elytris vix punctulatis. Long. .08

New York and Lake Superior. In addition to the characters above, this species has much shorter antennæ than the others, and the terminal articulations are more rounded.

TRYPHERUS.

Antennæ tenues, articulo 2^{do} vix brevior ; palpi maxillares articulo 2^{do} vix longiore, ultimo subtriangulari longiore ; tarsi postici articulis gradatim brevioribus, articulo 4^{to} valde bilobato ; ungues simplices, paranychio lato rotundato, intermedio muniti ; elytra abdomine multo breviora ; caput pone oculos vix angustatum.

The form of the palpi sufficiently distinguishes this genus from the preceding ; it approaches much closer to *Telephorus*. The male has a small additional anal segment ; the female has the penultimate joint of the abdomen deeply emarginate. In both sexes the superior segment is dilated, thickened at the edges and emarginate at apex, so that it projects on each side of the lower segment like a lateral appendage.

Another genus with short elytra, from Panama, approaches very closely to this, but the second and third joints of the antennæ together are not longer than the fourth ; the palpi are strongly securiform, and the last joint of the tarsi has no appendage between the claws.

1. *T. latipennis*. *Malthinus latipennis* Germ. Ins. Nov. 72 ; *Molor-*

chus marginalis Say. Long. Exped. to St. Peter's River 2, 192; *Malthinus marginalis* Say. Bost. Journ. Nat. Hist. 1, 160.

Common everywhere. Germar's description precedes Say's by several months. Say in the Bost. Journ. misquotes himself, as there is no description of this species to be found in the Journal of the Academy of Natural Sciences.

TYTTHONYX.

Antennæ elongatæ, compressæ, valde serratæ, articulo 2^{do} sesqui minore; palpi articulo ultimo vix longiore, ovali acuto; tarsi postici articulo 1^{mo} elongato, 2—4 brevibus, omnes crassiusculi, articulo ultimo brevi, ungues parvi integri; caput pone oculos non angustatum.

1. *T. erythrocephalus*. *Lampyrus erythrocephala* Fabr. Syst. El. 2, 105; *Malthinus serraticornis* Mels. Pr. Ac. Nat. Sc. 2, 305. Middle and Southern States.

Species unknown to me.

Lampyrus ruficollis Say. J. Ac. Nat. Sc. 5, 161.
Luciola maculicollis Laporte. Ann. Soc. Ent. Fr. 2, 148.
Cantharis vittata Fabr. Ent. Syst. 1, 219.
Cantharis ligata Say. J. Ac. Nat. Sc. 5, 166.
Cantharis jactata Say. Ibid. 5, 167.
Cantharis invalida Say. Bost. Journ. Nat. Hist. 1, 158.
Telephorus Westwoodii Kirby. Fauna Bor. Am. 4, 246.
Telephorus Samouelli Kirby. Ibid. 246.
Telephorus fulvicollis Germ. Ins. Nov. 70.
Telephorus notatus Man. Bull. Mosc. 1843. California.
Rhagonycha piniphila Esch. Man. Bull. Mosc. 1843.
Rhagonycha sericata Man. Bull. Mosc. 1846, p. 511. These and the next are from Stikha.
Rhagonycha binodula Man. Bull. Mosc. 1846, p. 512; an *Podabrus lævicollis* Lec.?

Malthinus abdominalis Dej. Cat. My specimen of this species is too imperfect for a satisfactory reference to any of the genera described above. From the form of the thorax and elytra, I think that it belongs to the genus alluded to as found at Panama. The following diagnosis will enable the species to be recognized: Rufus, capite pone oculos nigro, thorace quadrato, lateribus rectis, basi rotundato, ad medium late transversim concavo, elytris fuscis, subtilissime scabris, pedibus fuscis. Long. .26. Georgia; rare.

The Committee on Mr. Cassin's description of new species of Birds, reported in favor of publication.

Description of birds of the genera Laniarius, Dicrurus, Graucalus, Manacus and Picus, specimens of which are in the collection of the Academy of Natural Sciences of Philadelphia.

By JOHN CASSIN.

1. *Laniarius carbonarius*, nobis.

Form. Strong and rather heavy, wings short with the fourth, fifth, sixth and seventh quills longest and nearly equal, tail rather short, somewhat rounded

and with all the feathers having a crimped appearance throughout their length. Plumage of the rump long and silky. About the size of *Dryoscopus rufiventris*, (Swainson.)

Dimensions. Total length of skin from tip of bill to end of tail about $8\frac{1}{2}$ inches, wing $3\frac{3}{4}$, tail $3\frac{1}{2}$ inches.

Colors. Entire plumage above and below brownish black, palest on the quills, feathers of the rump paler at their basis, bill black.

Hab. Western Africa, discovered by Robert MacDowell, M. D., late of Sierra Leone.

Obs. This species resembles no other with which I am acquainted. Its rather short wings and tail give it more the general appearance of a *Thamnophilus* than I have noticed in any other African species. It is peculiar, so far as I know, for the uniform color of its plumage, which is (rump included) black.

2. *Dicrurus aculeatus*, nobis.

Form. Small, but rather larger than *D. Ludwigii*, A. Smith. Bill rather long, curved at the tip, toothed and sharply pointed; wings with the fourth quill slightly longest, but the third, fourth and fifth nearly equal; tail distinctly though not deeply forked.

Dimensions. Total length of skin from tip of bill to end of tail about $7\frac{1}{2}$ inches, wing $4\frac{1}{4}$, tail $3\frac{3}{4}$ inches.

Colors. Entire plumage black with a greenish lustre, inner webs and under surface of quills pale brownish, bill and feet black.

Hab. Fazogloa, Eastern Africa.

Obs. Resembles *D. musicus*, Vieill., but is smaller and has the bill longer and much stronger, comparatively; it is smaller also than *D. canipennis*, Swainson, which it somewhat resembles in having the light colored webs of the quills, but can easily be distinguished by its shorter wings and tail and stronger bill. It is larger than *D. Ludwigii*, A. Smith, and differs from all the species here mentioned in the relative lengths of the quills. Bonaparte is mistaken in making *D. emarginatus* (Licht.) a distinct species,—it is described by Lichtenstein in Verzeichniss, p. 52, and there expressly stated to be the bird figured by Le Vaillant, p. 167, (which is *D. musicus*, Vieill.)

3. *Graucalus azureus*, nobis.

Form. Small, about the size of *G. hypoleucus*, Gould. Specimen now about to be described not in good plumage, ends of quills and tail feathers worn, wings rather long.

Dimensions. Total length of skin from tip of bill to end of tail about $7\frac{1}{2}$ inches, wing $4\frac{1}{4}$, tail about 4 inches.

Colors. Front, extending to each eye, quills and tail black, entire plumage of other parts light blue, tertiaries tipped with irregular lines of white and black.

Hab. Western Africa, discovered by Robert MacDowell, M. D., late of Sierra Leone.

Obs. This species, which is remarkable for its color, appears to resemble the bird figured in Voyage au Pole Sud (Astrolabe & Zelèè) Ois. pl. 9, fig. 3, which is named in Bonaparte's Consp. Av. "*Graucalus Boyeri*." It is, however, much smaller. I have seen only the specimen now described.

4. *Manacus flaveolus*, nobis.

Form. Very similar to those of *M. gutturosus*, (Desm.) and *M. Candei*, (Parz.)

Dimensions. Total length of skin from tip of bill to end of tail about $3\frac{1}{2}$ inches, wing 2, tail about $1\frac{1}{2}$ inches.

Colors. Very similar to those of *M. gutturosus*, but with the parts which are white in that species, pale yellow in this. Top of the head, back, wings and tail, black; throat, breast, shoulders and broad collar around the back of the neck, pale yellow, running into cinereous on the abdomen.

Hab. Bogota, New Granada.

Obs. Two specimens of this little bird are in the collection, labelled as coming from Bogota, and both presenting the singular variation in color, from the common *M. gutturosus*, on the strength of which I have considered it specifically distinct. In point of color it may be stated as intermediate between *M. gutturosus* and *Candei*. It is smaller than the latter.

5. *Picus thyroideus*, nobis.

Form. Similar to that of *P. varius*, Linn., but rather larger and stouter, wings with the third quill longest, legs and toes rather slender, tail rather broad.

Dimensions. Total length of skin from tip of bill to end of tail about $8\frac{3}{4}$ inches, wing $5\frac{1}{2}$, tail $3\frac{3}{4}$ inches.

Colors.—♀ Breast with a large transverse patch or belt of black; middle of the abdomen pale yellow. Head and throat brownish buff, with obscure longitudinal stripes of black, back, wings coverts, sides of the body beneath and under tail coverts striped transversely with black and sordid yellowish white, rump and upper tail coverts white, the latter with black marks on their outer webs; quills, and tail black, more or less spotted with white.

Hab. California, discovered by Mr. John G. Bell, of New York.

Obs. Mr. Bell's two specimens are females, and are as yet unique. This species is a strict congener of *Picus varius*, Linn., but does not resemble it in colors, nor any other species which I have met with.

The Committee on Dr. Leidy's paper entitled, "Contributions to Helminthology," reported in favor of publication in the Proceedings.

Contributions to Helminthology.

By JOSEPH LEIDY, M. D.

MICROSTOMUM? Oersted. (Eustomum.)

Body elongated, compressed cylindroid, vibrillated; increasing by transverse segmentation in pairs. Head continuous with the body, furnished upon each side with a respiratory fovea. Mouth antero-inferior; intestinal canal produced anterior to the mouth in the form of a coecum; œsophagus amphoraform, muscular, not protractile; anus at first (after segmentation) open, afterwards becoming closed. Ocelli none. *Minute rhabdocœla inhabiting fresh water.*

This genus is the Microstomum of Oersted, if what I have observed to be

lateral respiratory foveæ of the head are, according to him and other authors, ocelli destitute of pigment.

In numerous individuals of what I have considered below to be of three distinct species of the genus, they were always observed to be in a state of division by pairs, and the primary pair of segments about their middle had already developed respiratory foveæ, and were slightly indented preparatory to division before the first pair were separated.

1. *MICROSTOMUM (Eustomum) PHILADELPHICUM, Leidy.*

Body linear, slightly attenuated posteriorly; head conoidal, with the apex surmounted by a small oval papilla; tail obtusely rounded. Respiratory fovea sub-hemispherical, placed at the base of the cone of the head. Mouth oval, protractile; œsophagus keg-shaped, intestine narrowed, cylindroid, dilated at the commencement. Colorless, translucent, vibrillated; increasing by transverse segmentation, always observed in the process of forming two segments.

Length 2-5ths line, by 1-500th in. broad.

Habitation. Found in the water of marshes and ditches in the neighborhood of Philadelphia.

2. *MICROSTOMUM (Eustomum) VARIABLE, Leidy.*

Body broad, linear; anteriorly and posteriorly obtusely rounded. Respiratory fovea, longitudinally oval, lateral. Intestine very broad. Colorless, increasing by twos.

Length from 1-80th to 1-24th of an inch by 1-800th to 1-400th in. broad.

Habitation. With the preceding.

3. *MICROSTOMUM (Eustomum) CAUDATUM, Leidy.*

Body long, narrow, linear; anteriorly obtusely rounded, posteriorly ending in a narrow, blunt, elevated tail 1-400th in. long from the position of the anus increasing by twos, the tail of the anterior segments projecting above and its whole length posterior to the head of the succeeding segment.

Length 3-4ths to 1½ lines; breadth 1-300th to 1-250th in.

Habitation. With the preceding.

RHYNCHODEMUS SYLVATICUS, Leidy: Pr. A. N. S. v, 289. Error of reference. *Planaria sylvatica, Leidy: ib. 241.*

STYLARIA FOSSULARIS Leidy: ib. 287. A number of individuals in a state of segmentation, from which the species was first described, preserved alone in a glass vessel with some confervæ, upon the occurrence of cold weather passed into the perfect condition as follows:

Body long, cylindroid, hyaline, permitting the ash-colored or yellowish intestine to be seen through the integument, divided into from 50 to 65 annulations, furnished with a distinct girdle posterior to the third annulus from the mouth, which extends the breadth of three annuli. Podal hooks in fasciculi of 10 to 12. Setæ commencing after the girdle, usually one often two upon each side of the annuli. Head obtusely rounded and prolonged into a cylindroid, very moveable, digitiform, transversely wrinkled proboscis. Caudal annulus terminating in two short lobes.

Length 3-4ths to 1 inch ; breadth 1-5th to 1-4th of a line. Length of proboscis 1-20th inch.

Remarks upon the habits.—When at rest the worm lies with the anterior four-fifths of the body upon the surface of the mud at the bottom of the water with the tail fifth buried. It is very active in its movements. It also constructs tubes of mud. It is hermaphrodite, and copulates in the same manner as the earth worms.

In a number of individuals I observed bunches of spermatozoa, and in several of the same from three to five nearly completely formed ova placed just posterior to the girdle.

The eggs when extruded were attached to the inside of the vessel in which the worms were kept. They consisted of an oblong quadrilateral translucent, whitish, papyraceous web, enclosing a light amber colored, bottle-like case, with an open neck, and the body containing an opaque white globular mass ; the true egg.

The perfect worm after living about two months died. Some of the ova several weeks after their extrusion were observed to have the young almost perfected, and these a few days after their escape presented the following characters :

Body cylindroid, divided into 35 annulations, each with a pair of fasciculi of 4 or 5 hooks ; posterior to the first three also provided on each side with one or two setæ. Tail bilobed, Head as in the parent. No girdle ; no indication of division ; and no apparent developing annuli at the tail end. Length 2 lines.

The Committee on Dr. Le Conte's paper, concluding his descriptions of the Longicorn Coleoptera of the United States, reported in favor of publication in the Journal.

The Committee, consisting of Dr. J. C. Fisher, Wm. S. Vaux and Dr. Bridges, appointed at a late meeting "to inquire into the expediency of enlarging the Hall of the Academy, so as to furnish greater accommodation for the Museum and Library, and to report a plan, with an estimate of the expense," offered a report, which was adopted, recommending the raising of the roof of the building sixteen feet higher, the division of the interior of the Hall into two compartments, by a floor thrown across from the second main gallery, and the opening of two windows into each hall on the north and south sides.

The entire expense of the improvement, as estimated by a contractor, was \$6,500, to meet with the Committee proposed that subscriptions be solicited, both from members and from the citizens of Philadelphia.

Two resolutions appended to the report, one that it was expedient to enlarge the Hall according to the plan submitted, and to appoint a Committee for the purpose of obtaining subscriptions, and the second giving the form of the subscription, were also adopted. Action on a third resolution was postponed for the present.

The following reports were read and adopted :

LIBRARIAN'S REPORT

For 1851.

The rapid and steady progress which the Library has made during the past few years, in the departments of Natural and Physical Science, and various kindred subjects, has continued during the present year—the number of additions amounting to 2,262.

The usual table, showing the increase under each head, is herewith submitted :

Subject.	Volumes.	Periodicals and Serials.	Pamphlets.	Subject.	Volumes.	Periodicals and Serials.	Pamphlets.
General Natural History,	148	33	28	Brought over,	869	593	422
Mammalogy, . . .	14	16	11	Dictionaries of Arts and Sciences,	46	41	
Ornithology,	31	16	18	Voyages and Travels,	43	26	11
Entomology and Crustacea,	24	30	7	Agriculture and Useful Arts,	12		27
Ichthyology and Herpetology,	43	6	16	Bibliography,	9		5
Conchology and Helminthology,	39		139	Biography,	3		3
Geology and Mineralogy,	97	21	90	Education,	3		4
Botany,	17	20	10	Geography,	18		1
Anatomy and Physiology,	41	5	40	History,	6		
Physical Science, Chemistry,				Languages,	14		
and Mathematics,	32		51	Miscellaneous,	13		48
Medicine, . . .	4		8	Maps and Charts,	7		
Transactions and Proceedings of Societies, Memoirs, Magazines, &c. &c., . . .	379	462	4				
	869	593	422		1075	660	521

Of the whole number, 42 have been contributed by authors; by editors; 77 by Societies and Corporations; 927 by Dr. Wilson; 1,025 by Mr. Edward Wilson; 87 by other members and correspondents; 7 by Departments of the United States; and 65 have been derived from miscellaneous sources;—total 2,262.

In addition to these, nearly 700 volumes, periodicals, &c., and pamphlets presented by Mr. Edward Wilson, are also in the Hall, but not yet recorded. The entire number actually contributed this year, by this most zealous friend of our Institution, will not fall far short of 1,700 of all descriptions.

Although far distant from us, Mr Wilson has manifested the liveliest interest in the success and advancement of the Academy, and has exerted his industry, and given his time and attention in searching out rare productions for its Library, to an extent which entitle him to our warmest thanks. Many of these works have been drawn from sources where they were nearly lost to science and the world.

For Dr. Wilson's contributions, numerous as ever, no additional commendation is needed here; his eulogy is already written on all around us.

Upon reference to the table, it will be seen that the additions to the different departments of Natural History form a large proportion of the whole number. Those also from authors, editors, societies, and from our own members and correspondents, are as numerous as usual. These latter have averaged, for succes-

sive years, several hundred volumes, periodicals and pamphlets, and, without other aid, would soon have filled our shelves.

We most cordially invite such contributions, which are gratifying, both as evincing a regard for the Institution, and as affording us opportunities for reciprocating. From Societies abroad, however, we have yet much to ask. Although in correspondence and exchange with many of them of the highest distinction, there are others which have failed to embrace the offers which we have extended to them. On this account foreign Societies, previously receiving our Journal and Proceedings, are now no longer on the exchange list, the only return for our publications having been formal acknowledgements of their receipt by these Societies. The value which we may now justly claim for the Journal and Proceedings of this Institution, entitles us to hope for a better and more liberal feeling hereafter.

Among the members of the Academy most conspicuous this year for contributions to the Library, I may mention Mr. George Ord and Mr. Robert Pearsall. To Mr. Ord we are indebted for 27 folio and quarto volumes of works; and to Mr. Pearsall for eight 4to and folio volumes of valuable dictionaries in foreign languages. To Mr. Haidinger, of Vienna, a correspondent of the Institution, we are under obligations for numerous works, of which he is either author or editor.

This constant and rapid influx of books and pamphlets has again nearly exhausted our available room. Scarcely two years have elapsed since the adjoining apartment was fitted up for the reception of books, yet but little space remains for additions, even in single volumes, and certainly none for any large series. Under such circumstances, and should our present rate of increase continue, it will be necessary to make further provision for accommodating the books. I therefore respectfully ask the early attention of the Society to this important matter, merely suggesting, on this occasion, that the apartment to the North of the one just referred to, and adjoining it, and now occupied as a duplicate room, and used also for unpacking parcels and boxes, could be very readily altered, at a moderate expense, and made to answer the required purpose.

I would also suggest to the Society the propriety of selling the duplicate volumes, now for the most part in the room last mentioned, and also the extensive series of French Documents. This will even be necessary should the proposed alteration be determined upon, as no space could be spared for them, except in the cellar, where they would not be likely to benefit by the change.

The proceeds of the sale of these works would, even at auction rates, form a fund which could be most advantageously applied at present to Library purposes.

I also beg again to call the attention of the Society to a proposition made in the last report, viz: to extend the prohibition of taking books from the Hall to *all the works in the Library*. No reason now exists for permitting any work to leave the Hall, every facility for consulting them here being afforded that can be asked for. Although thus far we have sustained no losses, nor has any injury been done, since their removal to the present apartment, yet future contingencies should be guarded against, and the fact steadily kept in view, that a single careless member may occasion a loss which neither time nor money could repair. The practice of loaning keys to strangers, who are usually irresponsible persons,

and admitting them to the Library at hours when the proper officers are not present, is of very doubtful propriety, and unless checked, may sooner or later cause the Society great regret.

Respectfully submitted by

WM. S. ZANTZINGER,
Librarian.

REPORT OF THE CURATORS

For 1851.

The Museum of this Academy, placed under the charge of the Curators and the Committees of the several departments, continues, up to the present time, in the best state of preservation. The depredation of insects upon destructible objects appears to be completely under control, through the combined influence of the vapor of ether and the oil of turpentine.

The collection of Mammalia, during the past year, has been classified and arranged by Drs. Bridges and Fisher.

All departments have received valuable additions, as follows :

Mammalia.—Of this class there have been presented 28 specimens, comprising 20 species, among which was a remarkably fine specimen of a Polar bear, for which we are indebted to Dr. E. K. Kane, U. S. N.; also a large Rocky Mountain sheep, presented by the Smithsonian Institution. The others are principally from Dr. G. Watson, Mr. W. S. Wood, Dr. J. C. Fisher, and Mr. W. S. Vaux.

Aves.—42 bird skins and 17 species of eggs have been presented, chiefly by Col. Geo. A. McCall, U. S. A., Messrs. Joshua Lippincott, John Lambert, J. D. Sergeant, and Dr. G. R. B. Horner.

There were also presented 29 nests and eggs of common English birds by Edward Wilson, Esq.

Reptilia.—We are under obligation to Prof. Franklin Bache, for the original collection of reptiles formerly belonging to Dr. Jacob Green, consisting of 94 specimens in bottles and 15 species dried Chelonianæ. Besides these we have received 25 species, chiefly from Dr. G. Watson and Mr. R. H. Kern.

Pisces.—Of these 26 species have been presented, principally from Prof. F. Bache.

Mollusca.—306 species of shells have been added to our collection, the principal donors being Dr. J. L. Burtt, U. S. N., Dr. Wier Mitchell, and Dr. Thos. Stewardson.

Insecta.—Of which 200 species have been received, chiefly Coleoptera and Lepidoptera.

Crustacea.—To this department we have received the greatest accession. Altogether 2,384 specimens have been presented. Of these 1,482 specimens, comprising 410 species, constituted the collection of M. Guérin Meneville, presented to the Academy by Dr. T. B. Wilson.

Annelida and Myriadoda.—Of which we have had presented 12 species.

Zoophyta.—Of this class 117 specimens have been presented, chiefly by Mr. Edward Wilson.

Comparative Anatomy.—In this department there have been presented and deposited 43 crania of man, and other mammalia, 2 mounted skeletons, and 7 miscellaneous objects. In this collection are particularly worthy of notice, a very perfect skeleton of a Narwhal with a tusk 8 feet in length, and four crania of the polar bear, male and female, presented by Dr. E. K. Kane.

The other skeleton presented is a remarkably fine one of a dog, articulated by Mr. Robert Nash, and obtained from Dr. F. W. Lewis.

Botany.—73 species of dried plants and fruits have been added to our collection, of which 64 species consist of fresh-water and marine algæ, presented by Mr. John Hooper, of New York.

Palæontology.—380 species of fossils have been received, among which are 42 species of minute and rare Eocene tertiary British fossils, arranged upon tablets accompanied by magnified views, prepared by the British Natural History Society, presented by Dr. T. B. Wilson. Also, the specimens from which were described the *Crocodylus antiquus Leidy*, and *Balæna prisca Leidy*, from the Miocene tertiary of Virginia, presented by Mr. Robert E. Nash; and the original specimens from which was described the *Platygonus compressus Le Conte* presented by Dr. J. L. Le Conte.

Mineralogy.—238 specimens of minerals have been presented. Among these was a remarkably fine large group of crystals of quartz, from Cochin China, presented by Dr. J. L. Burtt, and some fine specimens of Red Chabasie (Acadia-lite), Stilbite, &c., from Nova Scotia, presented by our correspondent, J. L. Chipman, Esq. The remainder were obtained principally from Dr. W. L. Sherman, U. S. N., and Mr. W. S. Vaux.

As valuable additions to the Academy, for the use of its members, are two excellent compound achromatic microscopes, one manufactured by Oberhäuser, and deposited by Dr. J. K. Mitchell; the other manufactured by Pritchard, and deposited by J. P. Wetherill, Esq.

Considering the very great value of the property of the Academy we cannot take too much care in its preservation, and without having the slightest wish that the access of the members themselves, to the Museum and Library, should be restricted, we think it would be of advantage if all were precluded from lending their keys of entrance to the building to any other than members or correspondents, excepting under such circumstances as a majority of the Curators and Librarian may deem advisable.

All of which is respectfully submitted by

JOSEPH LEIDY,
Chairman of Curators.

The annual report of the Treasurer was read, and referred to the Auditors.

A note was read from Mr. Samuel Powel, declining a re-election as Recording Secretary, in consequence of the necessity of his prolonged absence from the city.

The following Committee was appointed to solicit subscriptions for the purpose of enlarging the Hall of the Academy, under the reso-

lution adopted this evening: Dr. James C. Fisher, W. S. Vaux, George W. Carpenter, Dr. R. Bridges and J. Price Wetherill.

On motion of Dr. Coates, it was

Resolved, That members be precluded from lending their keys of entrance to the building, to any others than members or correspondents, excepting under such circumstances as a majority of the Curators and the Librarian may deem advisable.

The Society then proceeded to an election for officers for 1852. The following were duly elected.

<i>President</i>,	. . . .	GEORGE ORD.
<i>Vice Presidents</i>,	. . . .	J. Price Wetherill, Robert Bridges, M. D.
<i>Corresponding Secretary</i>,	. . . .	John Cassin.
<i>Recording Secretary</i>,	. . . .	B. Howard Rand, M. D.
<i>Librarian</i>,	. . . .	Wm. S. Zantzing, M. D.
<i>Treasurer</i>,	. . . .	George W. Carpenter,
<i>Curators</i>,	. . . .	Joseph Leidy, M. D. William S. Vaux, Samuel Ashmead, John Cassin.
<i>Auditors</i>,	. . . .	Wm. S. Vaux, Robert Pearsall, Samuel Ashmead.
<i>Publication Committee</i>,	. . . .	Wm. S. Vaux, Robert Bridges, Thomas B. Wilson, M. D. Isaac Lea, W. S. W. Ruschenberger, M. D.

ELECTION OF MEMBER.

The Rev. John Patton, of Philadelphia, was elected a *Member* of the Academy.

ERRATA IN VOL. V.

- Page 14, line 16 from bottom, for *Zeuker* read *Zenker*.
 " 22, " 10 " top, for *February* read *August*.
 " 55, " 23, " bottom, for *Plumus* read *Plumos*.
 " 117, " 16 " " for *Vol. 5* read *Vol. 4*.
 " 154, " 12 " top, for *necessarily* read *unnecessarily*.
 " 157, " 4 " bottom, for *Heidinger* read *Haidinger*.
 " 169, " 10 " top, for *Dikaj* read *Dijak*.
 " 209, " 7 " " for *isoseoles* read *isoscel-s*.
 " 209, " 10 " " for *joints* read *points*.
 " 210, " 5 " bottom, for *papulus* read *Passalus*.
 " 210, " 4 " " for *gulus* read *Julus*.
 " 212, " 21 " " for 8 read 13, and for 34 read 54.
 " 224, " 10 and 11 from bottom, for *Aspidagaster* read *Aspidogaster*.
 " 227, " 2 from bottom, insert John H. Brinton.
 " 256, " 5 " " for *Sowerly* read *Sowerby*.
 " 259, " 13 " " for *Statisque* read *Statistique*.
 " 275, " 10 " top, for *Longstreth* read *Langstroth*.
 " 276, " 19 " " for *robustum* read *priscum*.
 " 276, " 23 " " for *i. ½* read *i. ¾*.
 " 276, " 2 " bottom, before "by" insert "read."
 " 295, " 8 " top, for *were* read *are*.
 " 296, " 5 " " for *Silliquaria* read *Sigillaria*.
 " 297, " 13 " " for *Ireland* read *Iceland*.
 " 297, bottom line, for *Arctos* read *maritimus*.
 " 301, line 21 from bottom, for *cinqe* read *cinque*.
 " 345, top line, for *puncticollis* read *poricollis*.
 " 357, line 21 from top, for *Coaco* read *Cocoa*.
 " 357, " 11 " bottom, for *Borneo* read *Africa*.
 " 357, bottom line, for *Fiuns* read *Finns*.